

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions,  
and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) Vertebral A vertebral  
osteosynthesis device, comprising:

a connecting rod (2); and  
at least two bone anchoring elements, each bone  
anchoring element comprising i) a base part (7) for fixing to a  
vertebra, and ii) a connecting means (6, 3) for connection to the  
connecting rod (2), wherein, such as pedicular screws (1), clips  
or hooks,

one or two the connecting rod rods (2) [[,]] is  
connectable intended to be connected to said connecting means of  
said bone anchoring elements and to be fixed for fixing to the  
vertebrae via said base part of said bone anchoring elements, by  
means thereof, and

connection means (6, 3) {{ef}} said rod(s) (2) to said  
anchoring elements (1),

at least one of said bone anchoring elements (1) is a  
Polyaxial bone anchoring element in which said connection means  
(6, 3) comprises a being of the "polyaxial" type, i.e. comprising  
an articulated connecting part (6) articulated with respect to

the base part (7) to be movable in plural planes, of the anchoring device (1) intended to be fixed to the vertebra, characterized in that

said connecting part (6) [[and]] of said polyaxial bone anchoring element (1) comprises i) a transversal passage and ii)  
a rigid transversal part (11), the transversal passage and the  
rigid transversal part extending in substantially perpendicular  
directions,

said base part (7) of said polyaxial bone anchoring  
element comprises each comprise i) a transversal passage and ii)  
a rigid transversal part (24) , the transversal passage and the  
rigid transversal part extending in substantially perpendicular  
directions, (11, 24) which direction is substantially  
perpendicular to the direction of said passage,

said rigid transversal part (11) of the connecting part  
(6) is inserted in the transversal passage of the base part (7)  
with the rigid transversal part (11) of the connecting part (6)  
pivotal in the transversal passage of the base part (7), and

said rigid transversal part (24) (11, 24) of the  
connecting part (6) or of the base part (7) is being inserted in  
the transversal passage of the base part (7) or of the connecting  
part (6), and vice-versa, in such a way that these with the rigid  
transversal part (24) of the base part elements (11, 24) are  
pivotal in the transversal passage of the connecting part (6)  
these passages.

2. (currently amended) ~~Devicee~~ The device according to claim 1, characterized in that wherein said transversal passage and said rigid transversal element (11, 24) of the connecting part (6) [[or]] and of the base part (7) ~~are made by providing~~ comprise a ring (11) on the connecting part (6) and a ring (24) on the base part (7), the two rings (11) of the connecting part (6) and the base part (7) being inserted into each other similarly to links in a chain.

3. (currently amended) ~~Devicee~~ The device according to claim 1, characterized in that wherein each rigid transversal element (11, 24) comprises a rounded contact surface with the other rigid transversal element (11, 24), the radius of curvature of said contact surface being greater than the radius of the cross-section of the other rigid transversal element (11, 24).

4. (currently amended) ~~Devicee~~ The device according to claim 1, characterized in that wherein the anchoring element comprises an intermediate part, inserted between said rigid transversal elements (11, 24).

5. (currently amended) ~~Devicee~~ The device according to claim [[3]] 4, characterized in that wherein the rigid

transversal elements are made of a hard material with a low friction coefficient, or comprise a coating, or have undergone a treatment enabling them to have a high hardness and a low friction coefficient on their mutual contact zones, or in that said intermediate part is itself be made of a high hardness and low friction coefficient material.

6. (currently amended) ~~Device~~ The device according to claim 4, ~~characterized in that~~ wherein said intermediate part is particularly formed so as to be retained between both rigid transversal elements by means of the shape of said rigid transversal elements.

7. (currently amended) ~~Device~~ The device according to claim 1, ~~characterized in that~~ wherein,  
said connecting means further comprising another  
connecting part (3),  
said polyaxial "polyaxial" type anchoring element (1)  
further comprises at least one deformable part (16, 37) or  
portion of a part with an elastically deformable structure,  
placed, after assembly, between said another connecting part (3)  
(6, 3) and said base part (7), said deformable part (16, 37) or  
portion or part with an elastically deformable structure enabling  
mobility of the said connecting means part (6, 3), and therefore

enabling mobility of the connecting rod (2), with respect to base part (7), with damping.

8. (currently amended) ~~Device~~ The device according to claim 7, characterized in that wherein,

said at least one deformable part (16, 37) comprises a first deformable part (16) with an elastically deformable structure associated with said base part (7), comprises a part (16) with an elastically deformable structure and the a second deformable part (37) with an elastically deformable structure associated with said connecting part (3) comprises another part (37) with an elastically deformable structure, said two first and second deformable parts (16, 37) supporting each bearing one against the other in the assembly position.

9. (currently amended) ~~Device~~ The device according to claim 1, characterized in that wherein said connecting part comprises a curved bearing surface, suitable for resting against a corresponding curved bearing surface of said base part and sliding against said surface during movements of said connecting part with respect to said base part.

10. (currently amended) ~~Device~~ The device according to claim 9, characterized in that wherein said connecting part comprises a convex peripheral surface, in the form of a spherical

cap, and said base part comprises a corresponding concave peripheral surface.

11. (currently amended) ~~Device~~ The device according to claim 2, ~~characterized in that~~ wherein each rigid transversal element (11, 24) comprises a rounded contact surface with the other rigid transversal element (11, 24), the radius of curvature of said contact surface being greater than the radius of the cross-section of the other rigid transversal element (11, 24).

12. (currently amended) ~~Device~~ The device according to claim 2, ~~characterized in that~~ wherein the anchoring element comprises an intermediate part, inserted between said rigid transversal elements (11, 24).

13. (currently amended) ~~Device~~ The device according to claim 4, ~~characterized in that~~ wherein the rigid transversal elements are made of a hard material with a low friction coefficient, or comprise a coating, or have undergone a treatment enabling them to have a high hardness and a low friction coefficient on their mutual contact zones, or in that said intermediate part is itself be made of a high hardness and low friction coefficient material.

14. (currently amended) ~~Device~~ The device according to  
claim 5, ~~characterized in that~~ wherein said intermediate part is  
particularly formed so as to be retained between both rigid  
transversal elements by means of the shape of said rigid  
transversal elements.